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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Complete if Known	
		Application Number	10/786,354
		Filing Date	February 25, 2004
		First Named Inventor	Ahn, Kie
		Group Art Unit	2818
		Examiner Name	Huynh, Andy
Sheet 1 of 1		Attorney Docket No: 303.686US3	

US PATENT DOCUMENTS				
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date if Appropriate
<i>ah</i>	US-6,342,722	01/29/2002	Armacost, M., et al.	08/05/1999

EXAMINER

*Andy Huynh*

DATE CONSIDERED

06/10/05

Substitute Disclosure Statement Form (PTO-1449)

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**INFORMATION DISCLOSURE  
 STATEMENT BY APPLICANT**  
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<b>Complete if Known</b>	
Application Number	Unknown
Filing Date	Even Date Herewith
First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

Sheet 7 of 13

Attorney Docket No: 303.686US3

Ah	US-6,368,954	04/09/2002	Lopatin, S D., et al.	438	627	07/28/2000
	US-6,372,622	04/16/2002	Tan, , et al.	438	612	10/26/1999
	US-6,376,370	04/23/2002	Farrar, Paul A.	438	678	—
	US-6,383,920	05/07/2002	Wang, P., et al.	438	639	01/10/2001
	US-6,387,542	05/14/2002	Kozlov, Alexander , et al.	428	673	07/06/2000
	US-6,399,489	06/04/2002	M'Saad, H., et al.	438	680	11/01/1999
	US-6,403,481	06/11/2002	Matsuda, T., et al.	438	687	08/10/1999
	US-6,429,120	08/06/2002	Ahn, Kie Y., et al.	438	635	01/18/2000
	US-6,518,198	02/11/2003	Klein, Rita J.	438	758	08/31/2000
Ah	US-6,563,219	05/13/2003	Ireland, Phillip , et al.	257	758	11/02/2001

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>
Ah	JP-5-267643	10/15/1993	Muraoka, T.	H01L	029/46	

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume+issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
Ah		ABE, K., et al., "Sub-half Micron Copper Interconnects Using Reflow of Sputtered Copper Films", <u>VLSI Multilevel Interconnection Conference</u> , (June 25-27, 1995), 308-311	
		AMERICAN SOCIETY FOR METALS, "Metals Handbook", <u>Properties and Selection: Nonferrous Alloys and Pure Metals</u> , Ninth Edition, Volume 2, Metals Park, Ohio : American Society for Metals, (1989), 157, 395	
		AMERICAN SOCIETY FOR METALS, "Metals Handbook", <u>Metals Park, Ohio : American Society for Metals</u> , 8th Edition, Volume 8, (1973), 300-302	
		AMERICAN SOCIETY FOR METALS, "Phase Diagrams", <u>Metals Handbook</u> , 10th Ed., Vol. 3, Metals Park, Ohio, (1992),	
		AMERICAN SOCIETY FOR METALS, "Properties and Selection: Nonferrous Alloys and Pure Metals", <u>Metals Handbook</u> , 9th ed., vol. 2, Metals Park, Ohio, (1979), Table of Contents	
		ANDRICACOS, P. C., "Copper On-Chip Interconnections", <u>The Electrochemical Society Interface</u> , (1999), 32-37	
		ANONYMOUS, "Formation of Conductors at Variable Depths -- Using Differential Photomask, Projecting Images into Insulator by Reactive Ion Etching, Selectively Filling Images with Conductor", <u>Research Disclosure</u> , Disclosure No. RD 291015, Abstract, (July 10, 1988), 1 page	
Ah		ANONYMOUS, "Improved Metallurgy for Wiring Very Large Scale Integrated Circuits", <u>International Technology Disclosures</u> , 4, Abstract, (1986), 1 page	

EXAMINER

*Andy Murray*

DATE CONSIDERED

10/08/04

Substitute Disclosure Statement Form (PTO-1447)

\* EXAMINER: Initials if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). Applicant to place a check mark here if English language Translation is attached

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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 6 of 13		Attorney Docket No: 303.686US3

OK	US-6,159,842	12/12/2000	Chang, W. , et al.	438	622	01/11/1999
	US-6,168,704	01/02/2001	Brown, T. M. , et al.	205	118	02/04/1999
	US-6,171,661	01/09/2001	Zheng, B. , et al.	427	535	02/25/1998
	US-6,177,350	01/23/2001	Sundarrajan, A. , et al.	438	688	04/14/1998
	US-6,183,564	02/06/2001	Reynolds, G. J. , et al.	118	719	11/12/1998
	US-6,187,656	02/01/2001	Lu, , et al.	438	592	—
	US-6,190,732	02/20/2001	Omstead, , et al.	118	729	—
	US-6,197,688	03/06/2001	Simpson, Cindy R.	438	678	02/12/1998
	US-6,204,065	03/20/2001	Ochiai, T.	436	66	03/24/1998
	US-6,207,222	03/27/2001	Chen, Liang-Yuh , et al.	427	97	08/24/1999
	US-6,207,553	05/27/2001	Buynoski, M. , et al.	438	622	01/26/1999
	US-6,207,558	03/27/2001	Singhvi, Shri , et al.	438	648	10/01/1999
	US-6,208,016	03/27/2001	Farrar, Paul	257	643	02/24/1999
	US-6,211,049	04/03/2001	Farrar, Paul A.	438	597	02/24/1999
	US-6,211,073	04/03/2001	Ahn, K. Y.	438	653	02/27/1998
	US-6,211,561	04/03/2001	Zhao, B	257	522	11/16/1998
	US-6,214,719	04/10/2001	Nag, Somnath	438	619	09/30/1999
	US-6,218,282	04/17/2001	Buynoski, M. S.	438	619	02/18/1999
	US-6,221,763	04/24/2001	Gilton, Terry L.	438	643	04/05/1999
	US-6,232,219	05/15/2001	Blalock, , et al.	438	637	05/20/1998
	US-6,245,658	06/12/2001	Buynoski, M.	438	619	02/18/1999
	US-6,246,118	06/12/2001	Buynoski, M.	257	758	02/18/1999
	US-6,249,056	06/19/2001	Kwon, Dong-chul , et al.	257	758	11/01/1999
	US-6,265,311	07/24/2001	Hautala, J J. , et al.	438	680	04/27/1999
	US-6,265,811	07/24/2001	Takeuchi, Y. , et al.	—	—	—
	US-6,268,276	07/31/2001	Chan, L , et al.	438	619	12/21/1998
	US-6,271,592	08/07/2001	Kim, E. , et al.	257	751	08/06/1999
	US-6,281,585	08/28/2001	Bohra, S	257	758	11/12/1999
	US-6,284,656	09/04/2001	Farrar, Paul A.	438	687	08/04/1998
	US-6,287,954	09/11/2001	Ashley, L , et al.	438	622	12/09/1999
	US-6,288,442	09/11/2001	Farrar, Paul A.	257	678	09/10/1998
	US-6,288,905	09/11/2001	Chung, K. K.	361	771	10/04/1999
	US-6,323,543	11/27/2001	Jiang, T. , et al.	257	676	04/13/2000
	US-6,323,553	11/01/2001	Hsu, , et al.	257	751	11/01/2001
	US-6,326,303	12/04/2001	Robinson, Karl , et al.	438	678	02/11/2000
	US-6,329,279	12/11/2001	Lee, R	438	619	03/24/2000
	US-6,342,448	01/29/2002	Lin, J. , et al.	438	687	05/31/2000
	US-6,358,842	03/19/2002	Zhou, Mei-Sheng , et al.	438	633	08/07/2000
OK	US-6,359,328	03/01/2002	Dubin,	257	622	—

EXAMINER

*Adrian K. Kunkel*

DATE CONSIDERED

10/08/04

Substitute Disclosure Statement Form (PTO-1449)  
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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 5 of 13	Attorney Docket No: 303.686US3	

ah	US-5,981,350	11/09/1999	Geusic, Joseph E., et al.	438	386	05/29/1998
	US-5,985,759	11/16/1999	Kim, E., et al.	438	653	02/24/1998
	US-5,989,623	11/23/1999	Chen, Liang-Yuh, et al.	427	97	08/19/1997
✓	US-5,994,776	11/30/1999	Fang, Peng, et al.	257	758	04/20/1998
	US-5,994,777	11/30/1999	Farrar, P. A.	257	758	08/26/1998
	US-6,001,730	12/14/1999	Farkas, J., et al.	438	627	10/20/1997
	US-6,004,884	12/21/1999	Abraham, L. C.	438	714	02/15/1996
	US-6,008,117	12/28/1999	Hong, Qi-Zhong, et al.	438	629	03/19/1997
	US-6,015,465	01/18/2000	Kholodenko, A., et al.	118	719	04/08/1998
	US-6,015,738	01/18/2000	Levy, H. J., et al.	438	275	11/17/1997
	US-6,017,820	01/25/2000	Ting, C. H., et al.	438	689	07/17/1998
	US-6,022,802	02/08/2000	Jang, Syun-Ming	438	656	03/18/1999
	US-6,025,261	02/15/2000	Farrar, C., et al.	438	619	04/29/1998
	US-6,030,877	02/29/2000	Lee, C., et al.	438	381	10/06/1997
	US-6,037,248	03/14/2000	Ahn, Kie	438	619	06/13/1997
	US-6,054,172	04/25/2000	Robinson, K., et al.	427	97	02/25/1999
✓	US-6,057,226	05/02/2000	Wong, L. D.	438	623	11/25/1997
	US-6,065,424	05/23/2000	Shacham-Diamand, Y., et al.	118	696	12/18/1996
	US-6,069,068	05/30/2000	Rathore, H. S., et al.	438	628	10/08/1997
	US-6,071,810	06/06/2000	Wada, Junichi, et al.	438	635	12/23/1997
	US-6,075,278	06/13/2000	Farrar, P. A.	257	522	04/24/1997
	US-6,075,287	06/13/2000	Ingraham, A. P., et al.	—	—	—
	US-6,091,136	07/18/2000	Jiang, T., et al.	257	676	11/17/1998
	US-6,091,475	07/18/2000	Ogino, T., et al.	349	149	12/09/1997
	US-6,100,193	08/08/2000	Suehiro, S., et al.	438	685	09/24/1997
	US-6,121,126	09/19/2000	Ahn, Kie, et al.	438	602	02/25/1998
	US-6,126,989	10/03/2000	Robinson, Karl, et al.	427	97	08/26/1998
	US-6,136,095	10/24/2000	Xu, Z., et al.	118	719	10/06/1997
	US-6,139,699	10/31/2000	Chiang, T., et al.	204	192.15	05/27/1997
	US-6,140,228	10/31/2000	Shan, E., et al.	438	653	11/13/1997
	US-6,140,234	10/31/2000	Uzoh, Cyprian, et al.	438	678	01/20/1998
	US-6,140,456	10/31/2000	Lee, Chung J., et al.	528	196	10/24/1997
	US-6,143,641	11/07/2000	Kitch, Vassili	438	618	01/26/2000
	US-6,143,646	11/07/2000	Wetzel, J. T.	438	637	06/03/1997
	US-6,150,261	11/21/2000	Hsu, C., et al.	438	640	05/25/1999
	US-6,153,507	11/28/2000	Mikagi, K.	438	618	01/13/1998
ah	US-6,159,769	12/12/2000	Farnworth, Warren M., et al.	438	108	01/05/1999

EXAMINER

*Adrian Kuehl*

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Substitute Disclosure Statement Form (PTO-1449)  
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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 4 of 13	Attorney Docket No: 303.686US3	

al	US-5,725,689	03/10/1998	Nishida, S., et al.	148	320	10/05/1995
	US-5,739,579	04/14/1998	Chiang, Chien, et al.	257	635	09/10/1996
	US-5,763,953	06/09/1998	Iijima, T., et al.	257	762	01/18/1996
	US-5,780,358	07/14/1998	Zhou, M. S.	438	645	04/08/1996
	US-5,785,570	07/28/1998	Bruni, M. D.	445	52	07/25/1995
	US-5,792,522	08/11/1998	Jin, S., et al.	427	575	09/18/1996
	US-5,792,706	08/11/1998	Michael, M. W., et al.	438	626	06/05/1996
	US-5,801,098	09/01/1998	Fiordalice, R., et al.	438	653	09/03/1996
	US-5,814,557	09/29/1998	Venkatraman, Ramnath, et al.	438	622	05/20/1996
	US-5,821,168	10/13/1998	Jain, Ajay	438	692	07/16/1997
	US-5,824,599	10/20/1998	Schacham-Diamond, Yosef, et al.	438	678	01/16/1996
	US-5,852,871	12/29/1998	Khandros, I. Y.	29	843	12/11/1995
	US-5,858,877	01/12/1999	Dennison, C. H., et al.	438	700	01/21/1997
	US-5,880,018	03/01/1999	Boeck, Bruce A., et al.	438	619	
✓	US-5,891,797	04/06/1999	Farrar, P. A.	438	619	10/20/1997
	US-5,891,804	04/06/1999	Havemann, R. H., et al.	438	674	04/14/1997
	US-5,893,752	04/13/1999	Zhang, J., et al.	438	687	12/22/1997
	US-5,895,740	04/20/1999	Chien, Rong-Wu, et al.	430	313	11/13/1996
	US-5,897,370	04/27/1999	Joshi, R. V., et al.	438	632	10/28/1996
	US-5,900,668	05/04/1999	Wollesen, D. L.	257	522	11/30/1995
	US-5,907,772	05/25/1999	Iwasaki, Haruo	438	253	02/26/1997
	US-5,911,113	06/08/1999	Yao, G., et al.	438	649	03/18/1997
	US-5,913,147	06/15/1999	Dubin, Valery, et al.	438	687	01/21/1997
	US-5,925,930	07/20/1999	Farnworth, Warren M., et al.	257	737	05/21/1996
	US-5,930,596	07/27/1999	Klose, H., et al.	438	98	03/07/1995
	US-5,930,669	07/27/1999	Uzoh, Cyprian	438	627	04/03/1997
	US-5,932,928	08/03/1999	Clampitt, D. A.	257	758	07/03/1997
	US-5,933,758	08/03/1999	Jain, A.	438	687	05/12/1997
	US-5,940,733	08/17/1999	Beinglass, Israel, et al.	438	655	07/29/1997
	US-5,948,467	09/07/1999	Nguyen, T., et al.	427	99	07/24/1998
	US-5,962,923	10/05/1999	Xu, Z., et al.	257	774	08/07/1995
	US-5,968,333	10/19/1999	Nogami, T., et al.	205	184	04/07/1998
	US-5,969,422	10/19/1999	Ting, C., et al.	257	762	05/15/1997
	US-5,972,179	10/26/1999	Chittipeddi, et al.	204	192.17	09/30/1997
	US-5,972,804	10/26/1999	Tobin, Philip J., et al.	438	786	11/03/1997
al	US-5,976,710	11/02/1999	Sachdev, K. G., et al.	428	620	04/10/1997

EXAMINER

*Andrew H. Hays*

DATE CONSIDERED

10/08/02

Substitute Disclosure Statement Form (PTO-1449)  
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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown 10/786,354
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Attorney Docket No: 303.686US3		

Sheet 1 of 13

US PATENT DOCUMENTS						
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
OK	US20010054771	12/27/2001	Wark, J. M., et al.	—	—	—
	US20020014646	02/07/2002	Tsu, , et al.	257	296	—
	US20020028552	03/07/2002	Lee, , et al.	438	243	—
	US20020096768	07/25/2002	Joshi, Rajiv Vasant	257	750	—
	US-3,337,334	08/22/1967	Fenn, R. W., et al.	75	150	12/06/1963
	US-3,548,915	10/22/1970	Richmond, W. J., et al.	164	68	06/11/1969
	US-3,832,456	08/27/1974	Kobetz, Paul, et al.	423	645	10/18/1962
	US-3,923,500	12/02/1975	Kitazawa, Kunio, et al.	75	156.5	09/04/1974
	US-3,932,226	01/13/1976	Klatskin, J. B., et al.	204	16	12/06/1974
	US-3,954,570	06/04/1976	Shirk, Albert, et al.	204	15	11/11/1974
	US-4,022,931	05/10/1977	Black, J., et al.	427	91	06/13/1975
	US-4,029,377	06/14/1977	Guglielmi, A. C.	339	19	02/03/1976
	US-4,065,330	12/27/1977	Masumoto, Hakaru, et al.	148	31.55	02/22/1977
	US-4,101,855	07/18/1978	Drapeau, Donald R.	335	106	11/05/1976
	US-4,158,719	06/19/1979	Frantz, E.	428	567	06/09/1977
	US-4,233,066	11/11/1980	Sundin, Anders O., et al.	75	142	08/14/1975
	US-4,314,594	02/09/1982	Pfeifer, Friedrich, et al.	148	108	04/29/1980
	US-4,386,116	05/31/1983	Nair, Krishna K., et al.	427	99	12/24/1981
	US-4,389,429	06/21/1983	Soclof, Sidney I.	438	492	06/28/1982
	US-4,394,223	07/19/1983	Hall, Dean	204	15	10/06/1981
	US-4,423,547	01/03/1984	Farrar, P. A., et al.	29	571	06/01/1981
	US-4,561,173	12/31/1985	Te Velde, T. S.	438	619	06/07/1983
	US-4,565,157	01/21/1986	Brors, D. L., et al.	118	719	03/29/1983
	US-4,574,095	03/04/1986	Baum, Thomas H., et al.	427	53.1	11/19/1984
	US-4,670,297	06/02/1987	Lee, K., et al.	427	91	06/21/1985
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	US-4,847,111	07/11/1989	Chow, Yu C., et al.	427	38	06/30/1988
	US-4,857,481	08/15/1989	Tam, G., et al.	437	182	03/14/1989
AK	US-4,931,410	06/05/1990	Tokunaga, Takafumi, et al.	437	189	08/25/1988

EXAMINER

*Andi Kuehl*

DATE CONSIDERED

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